

# Working together: SpecsIntact, UFGS, ProjNet, WBDG, and the IFC Model

William Brodt

Facilities Engineering and Real  
Property Division, NASA



# SpecsIntact Accomplishments

- New User Tools
- Web Site
- Converted from SGML to XML
- About 10,000 users

# USACE, NAVFAC and NASA are combining their construction specifications into the Unified Facilities Guide Specifications ...

- Expect:
  - higher quality, clear specifications.
  - better designs and bids.
  - reduced costs to maintain specifications.

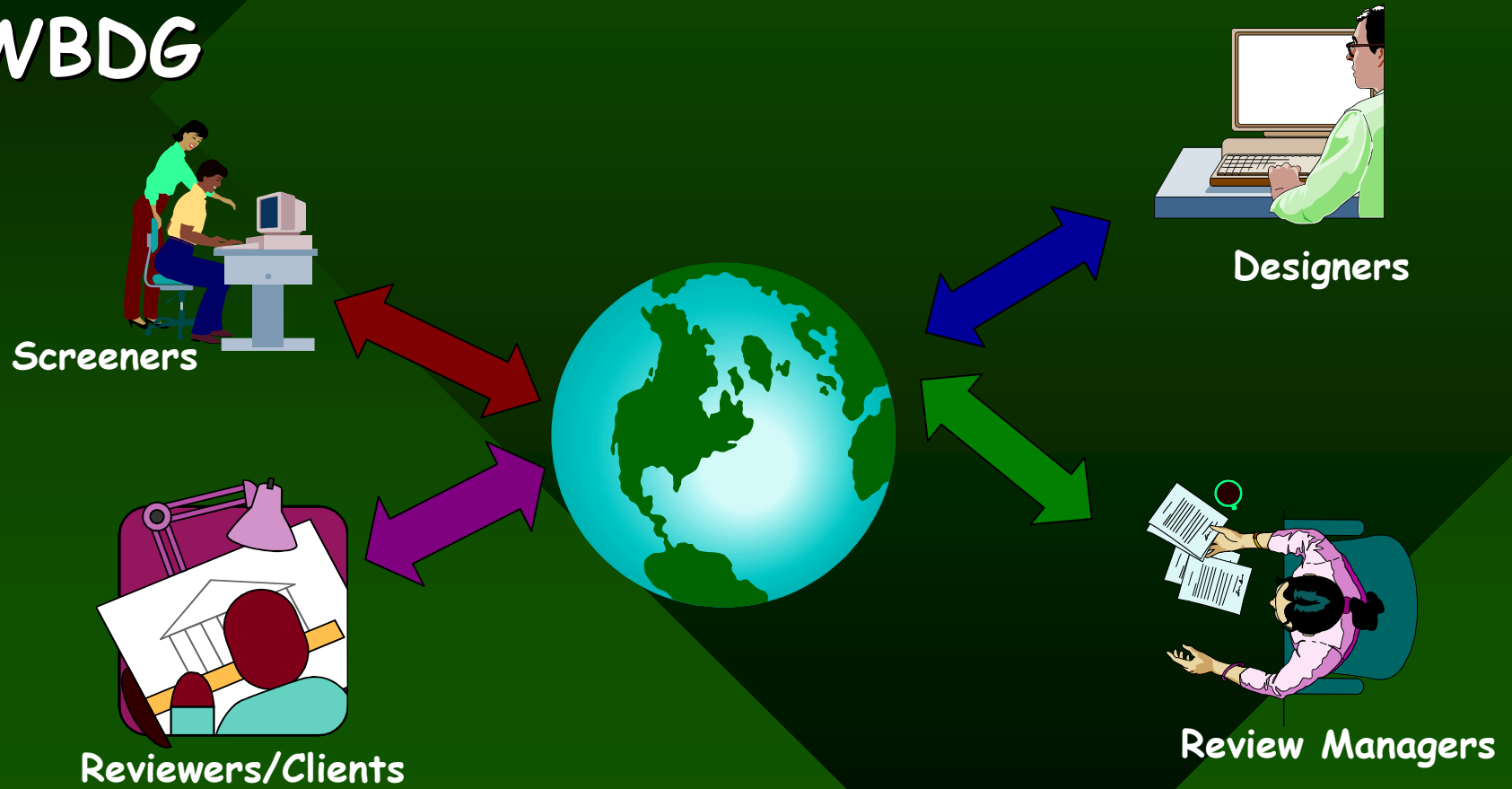
# SPECSINTACT and UFGS becoming XML compliant to support IFC model.

- Expect:
  - Software industry to develop specification checkers
  - better designs , e.g. tagging individual specifications to design documents
  - reduced life-cycle costs

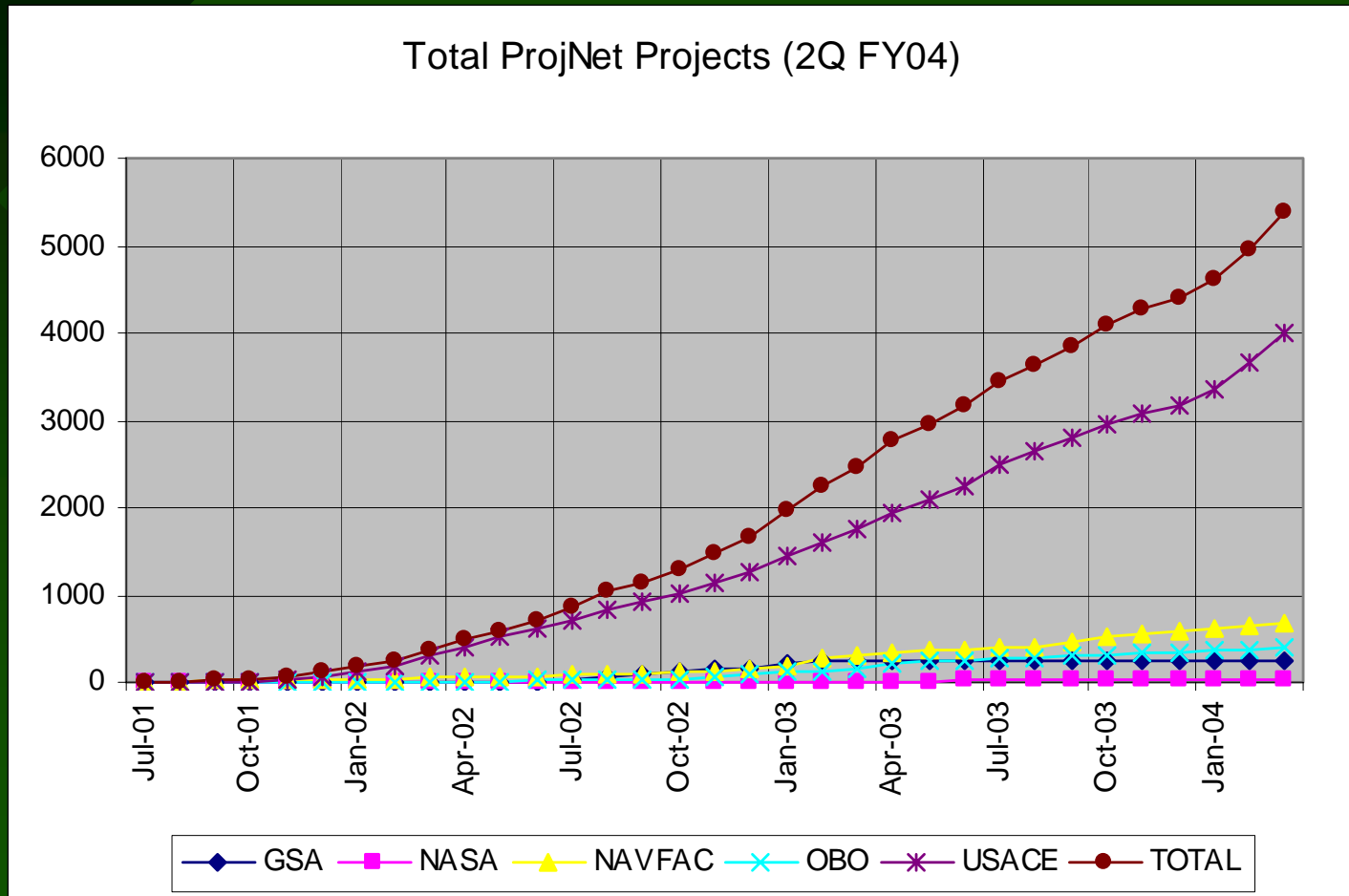
# USACE, NAVFAC, GSA, State Dept and NASA use ProjNet: DrChecks, Filer, Change Request System and Criteria Management System.

- Benefits
  - Higher quality design documents
  - Automated routing and tracking of criteria change requests
  - Reduced costs throughout the facility life-cycle
  - Intergovernmental collaboration

# ProjNet: Web-based, secure application for planning and design of facilities is linked to criteria documents in the WBDG



# ProjNet Use Increasing



# GSA Adopting IFC Model

- ProjNet model server will allow secure exchange/retrieval of models.



# IFC 2x2 supports Facility Management



**Asset definition** allocation  
of time, cost and work order  
data

**Extended cost model** enables  
costing of any object, with any type of  
cost, at any and all points in the lifecycle,  
total lifecycle cost capture, budgets,  
estimates, cost roll up

## **Condition Monitoring**

Captures condition data including both  
measured (by Instrumentation) and  
assessed (by visual inspection).

**Service Life Data**

**Environmental impact Data**

**Permits**

**Operating and Maintenance  
information**

Provision of capability to capture  
operating and maintenance  
instruction information based on  
the NAVFAC/USPHS developed  
OMSI XML standards

Working Together: Presentation to NSTC Physical  
Infrastructure Working Group

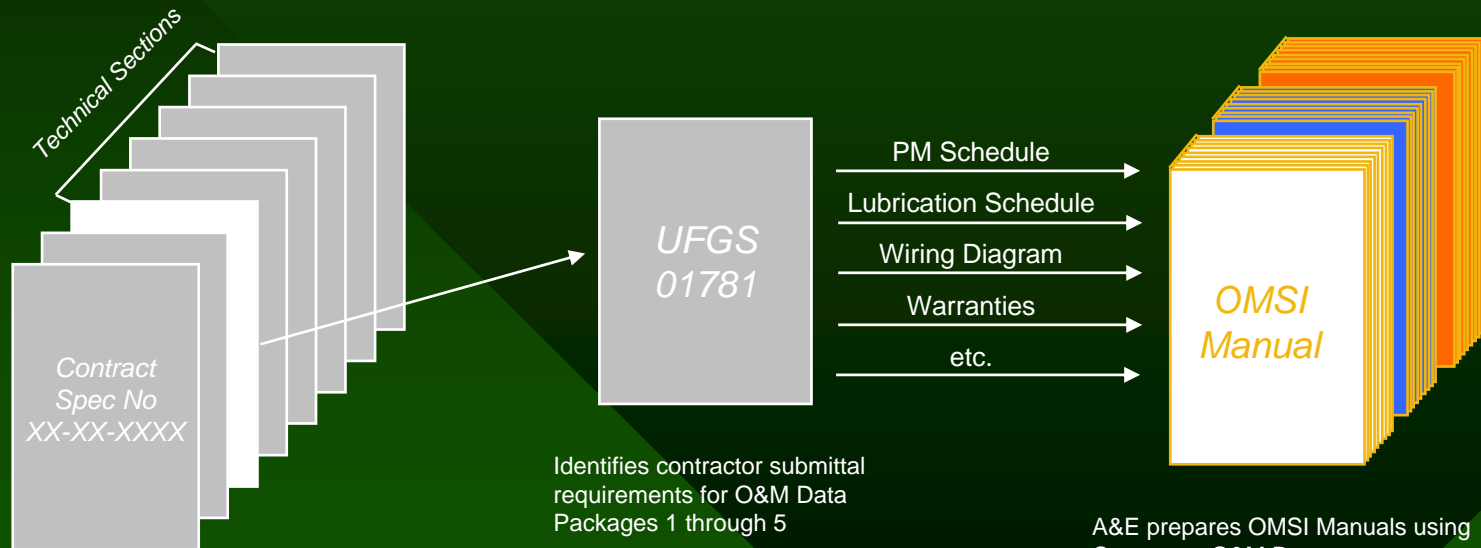
January 15, 2004

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# UFGS 01781 O&M Data Incorporated into IFC model

## Operation and Maintenance Support Information

UFGS 01781 Operation & Maintenance Data



Technical sections specify O&M Data Packages for certain equipment and systems per Section 01781

A&E prepares OMSI Manuals using Contractor O&M Data

OMSI Manuals will also include other contractor submittals such as manufacturer's catalog data, test reports, key shop drawings, etc.

# IAI OMSI Related Activities

- Completed our work on the Ifc-mBomb project
  - demonstrated how O&M information can be extracted from an object model.
- Recommend focus on getting O&M data included as early as possible, preferably during design.
- Did a quick prototype to show how health and safety plan information could also be derived from the object model.
- Mapped IFC information to Maximo using the MRO XML API.
- Completed significant work on ifcXML implementation guide

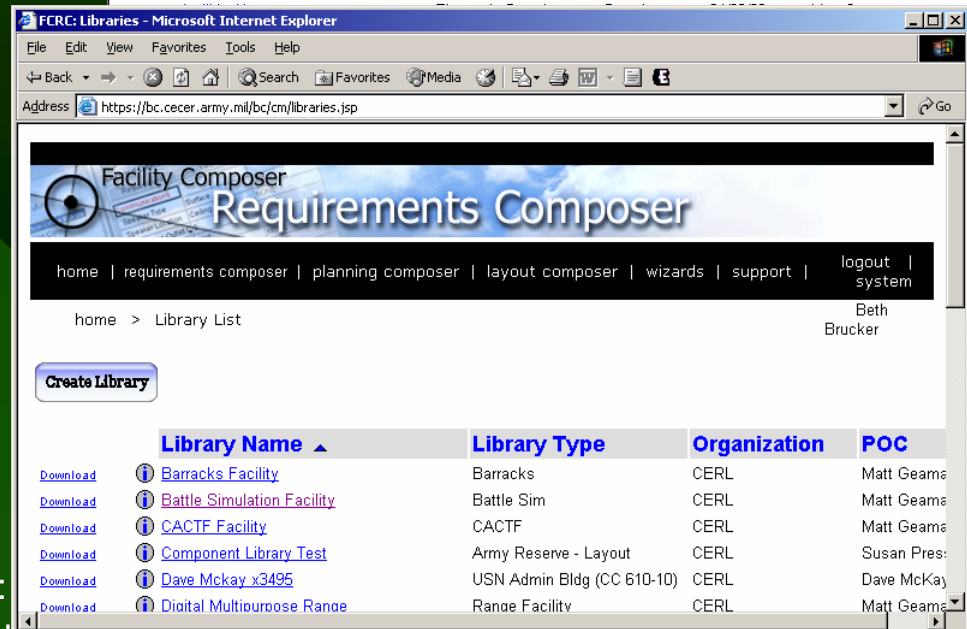
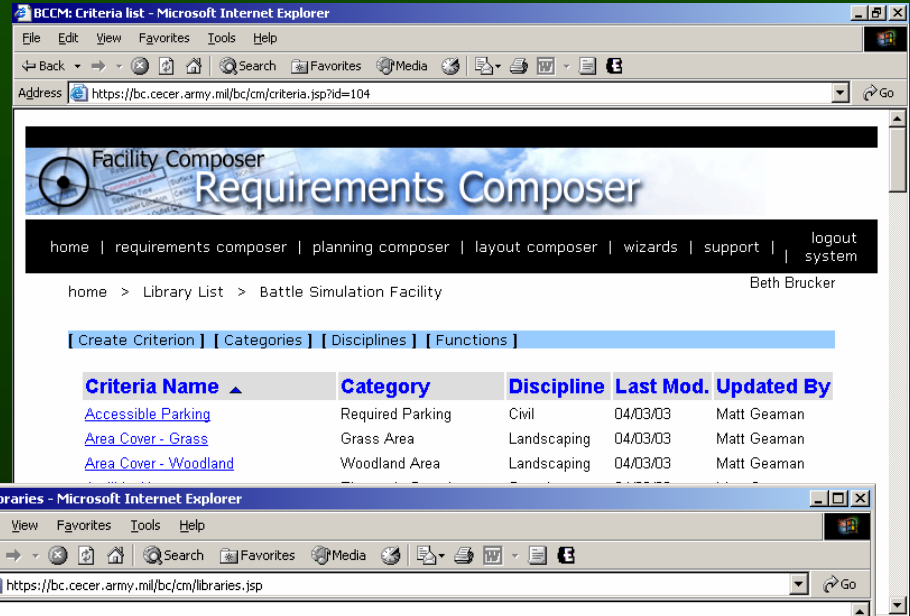
# IFC Architecture



- Attributes versus Property Sets
  - **Universal applicability**
  - **Hardwired into the IFC Model**
- Property Sets may be attached to the Model
  - **Operate exactly the same as Attributes**
  - **Allow for regional variations around the globe**
- Examples of Property Sets
  - **U.S. National CAD Standard**
  - **Building Codes (or Model Building Codes)**
  - **Classification and Terminology Systems, e.g.,**
    - **MasterFormat and OmniClass**

# Requirements Composer

- Web-based repository for facility standard requirements and criteria
- Links requirements and criteria to project, building, story, function, and space Outputs XML library for use in developing facility program
- Provides permission based access controls

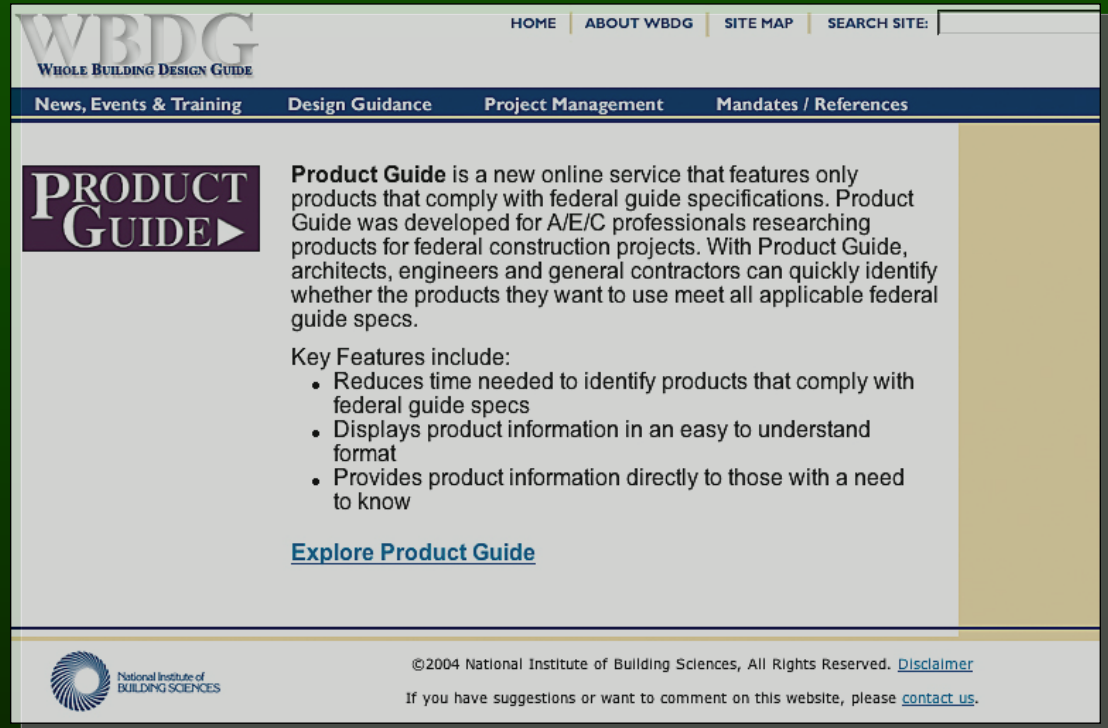


Working Together:

Infrastructure Working Group

# Product Guide

- Developed for A/E/C professionals working on federal design and construction projects
- A database which contains only construction products and materials that comply with Federal guide specifications



# Compliance Matrix

- **Easy-to-read** chart details federal guide specifications for featured product
- **Compliance** with applicable federal guide specifications can be determined at a glance

	FOAMULAR 404			FOAMULAR 604			FOAMULAR 404RB			FOAMULAR 604RB		
ASTM E 84 Flame spread <= 75 Smoke developed rating <= 150		✓			✓			✓			✓	
ASTM C 518 Thermal transmission		✓			✓			✓			✓	
ASTM C 1136 Water vapor transmission		✓			✓			✓			✓	
ASTM C 578 Type II / Type IV / Type X		✓	✓		✓	✓		✓	✓		✓	✓

✓ — Complies with Federal requirement  
 — Product not available

# NASA Supporting IFC Compatibility of WBDG Product Data.

- Expect:
  - IFC tagged product data
  - Increased awareness of IFC model among manufacturers
  - Product selections match UFGS requirements



# Opportunities...

- Greater Federal agency participation could yield significant benefits

# Enlist UFGS Support . . .

- Federal agencies should join UFGS
- Take advantage of the links to the IFC model and the WBDG Product Data
- Potential to develop a “Specifications Checker” model

# Summary of Benefits

- More SpecsIntact, UFGS and ProjNet users will produce more informed users; will yield better designs
- Designed to meet specific Federal requirements
- Outstanding opportunity to support IFC model